SERVICE MANUAL
Level 1&2

NOKIA
6303
CLASSIC

Transceiver characteristics

Band:
RM-443: Tri-band EGSM 900/1800/1900
Display:
QVGA display (320 x 240 pixels) 2.2" colour display,
Up to 16M colors

Camera:
3.2 Mpix Auto Focus camera with 8x digital zoom, dual LED flash
Operating System:
S40 6th Edition

Connections:
Bluetooth 2.0 +EDR, 3.5 mm AV connector, Micro USB, MicroSD card up to 4 GB

Transceiver with BL-5CT battery pack

Talk time	Standby	Note
Up to 7 hours	Up to 450 hours	Depends on network parameters and phone settings

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1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	30.01.2009	First draft
Approved	1.0	31.03.2009	First approved version
Approved	2.0	05.06.2009	Steps 32 and 33 in the disassembly instructions have been removed as the earpiece is not a spare part. The screw order in the Assembly hints has been updated.

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
mailto:Service.Manuals@nokia.com

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

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The availability of particular products may vary by region.

IMPORTANT

This document is intended for use by qualified service personnel only.

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3. WARNINGS AND CAUTIONS

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

3.1 Warnings

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.

2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.

3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

3.2 Cautions

1. Servicing and alignment must be undertaken by qualified personnel only.

2. Ensure all work is carried out at an anti–static workstation and that an anti–static wrist strap is worn.

3. Use only approved components as specified in the parts list.

4. Ensure all components, modules screws and insulators are correctly re–fitted after servicing and alignment.

5. Ensure all cables and wires are repositioned correctly.

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4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.
Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.
To replace the covers ESD protection must be applied.
All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.
All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).
Every repair action involving opening the product or handling the product components must be done under ESD protection.
ESD protected spare part packages MUST NOT be opened/closed out of an ESD Protected Area.
For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

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5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

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6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out.

When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMh batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means Use the battery only for its intended purpose.

Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.

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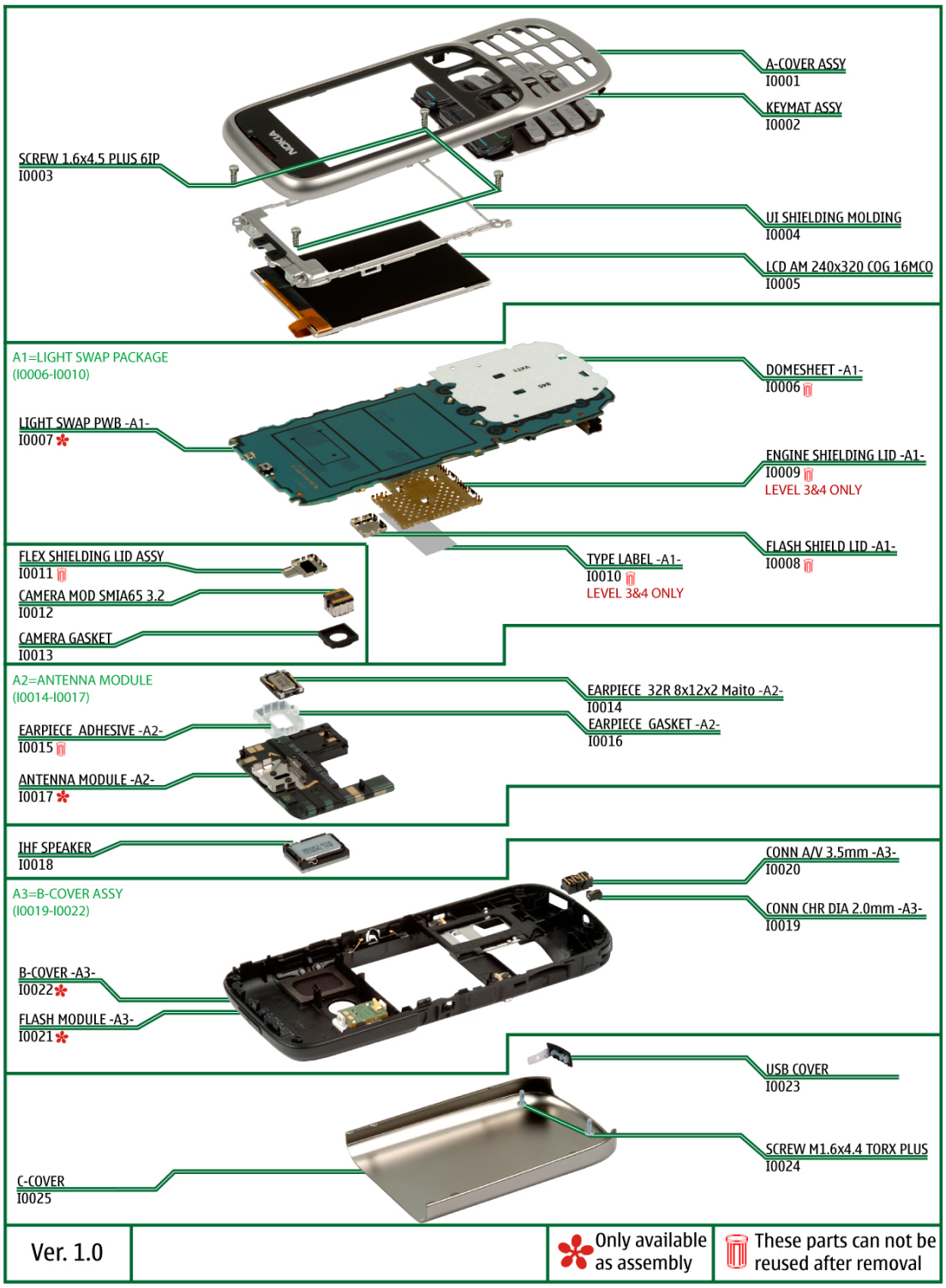
7. EXPLODED VIEW

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

6303 classic RM-443 EXPLODED VIEW



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8. SERVICE DEVICES

FLS-5 Flash device	RJ-230 Universal Soldering Jig	BP-5CT internal battery
CA-101D Service cable (CA-100C China)	AC-8E charger (AC-6C for China)	NMP standard toolkit (v2) For more information, refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in “Recommended service equipment” document on NOKIA Online.

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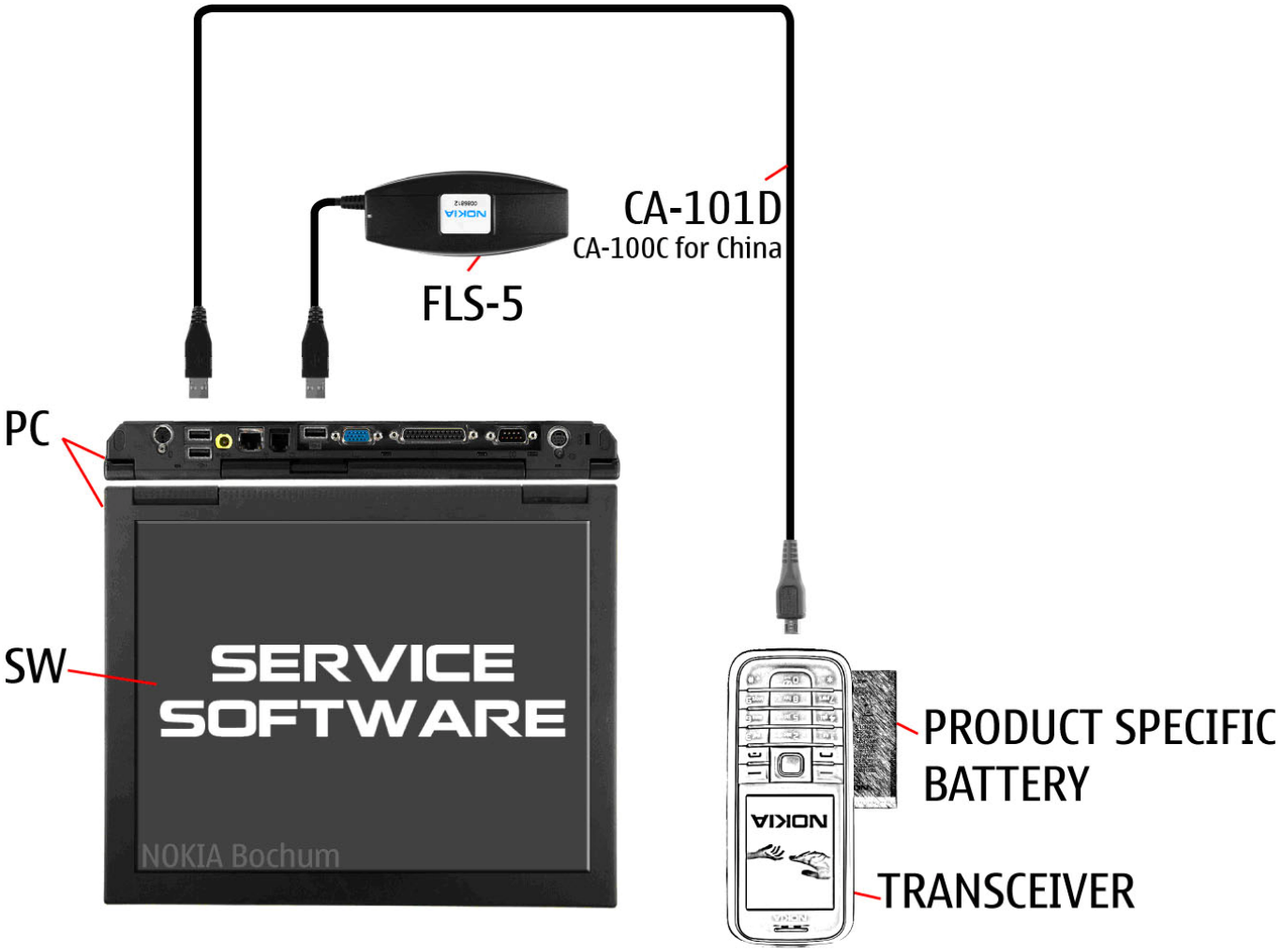
9. SW-UPDATE

Flash concept – (Point of Sales)

To use the FLS-5 Flash Dongle, you have to follow the user guide inside the sales package.
Please check always for the latest version of flash software which is available on Nokia Online.



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10. DISASSEMBLY INSTRUCTIONS

1) Open the C-COVER by sliding the cover as shown.

2) Remove the C-COVER.

3a) Unscrew the two T6+ screws.

3b Remove the screws with the tweezers. Do not use the screws again.

4) Use the SS-93 tool to open the USB COVER to have better access on the bottom side.

5) Release the bottom clip with the SS-93 tool.

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6a) Use the SS-93 tool to release the clips, one on each side.

6b) There are altogether 3 clips to be released. Make sure you have released all of them before proceeding.

7) Wedge the SS-93 tool under the A-COVER. Slide the tool along the A-COVER to open the clips on the top.

8) Open the clips on the other side as instructed in the previous step.

9a) To release the A-COVER incl. KEYMAT ASSY lift and slide the A-COVER up as shown.

9b) Remove the A-COVER.

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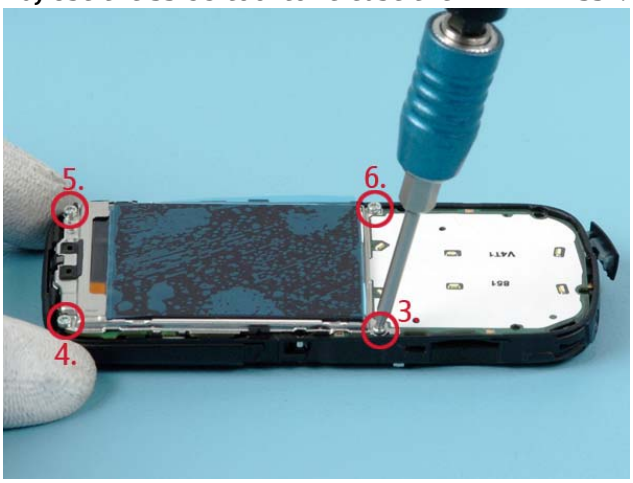
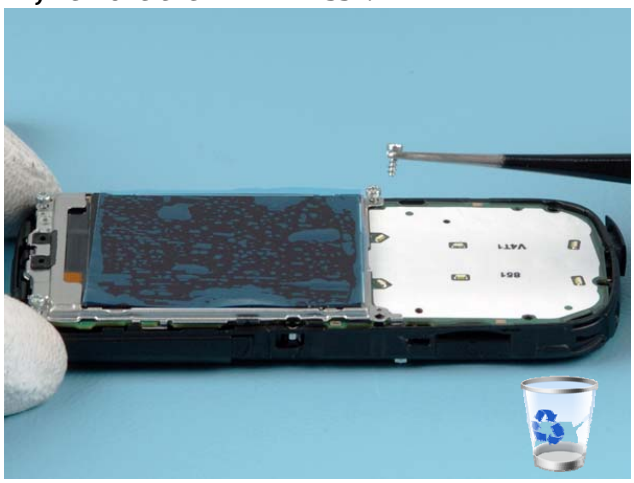
10) Use the SS-93 tool to release the KEYMAT ASSY.

11) Remove the KEYMAT ASSY.



12a) Unscrew the four T6+ screws in the order shown.



12b) Remove the screws with the tweezers. Do not use the screws again.

13) Make sure that the USB COVER is still open.

14) Use the SS-93 tool to release the clip on top to lift up the PWB incl. UI SHIELDING ASSY and LCD. Be careful not to damage the components on the PWB!

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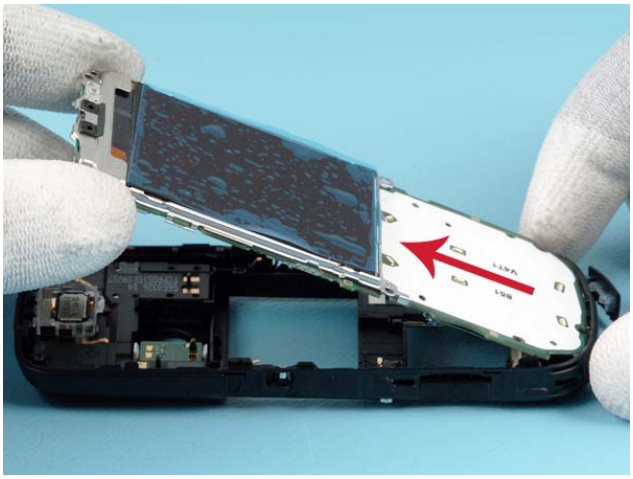
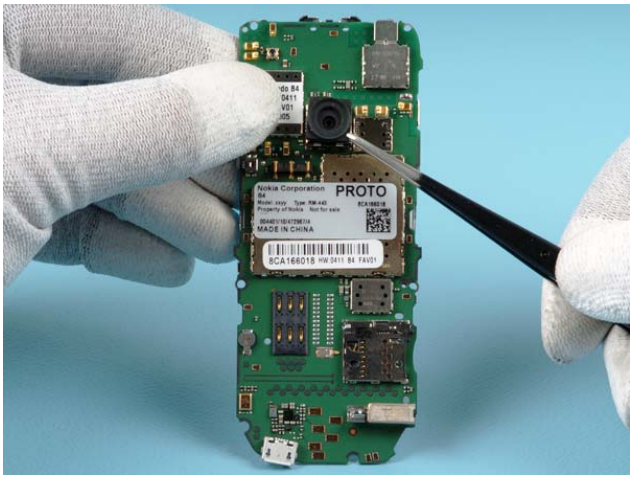
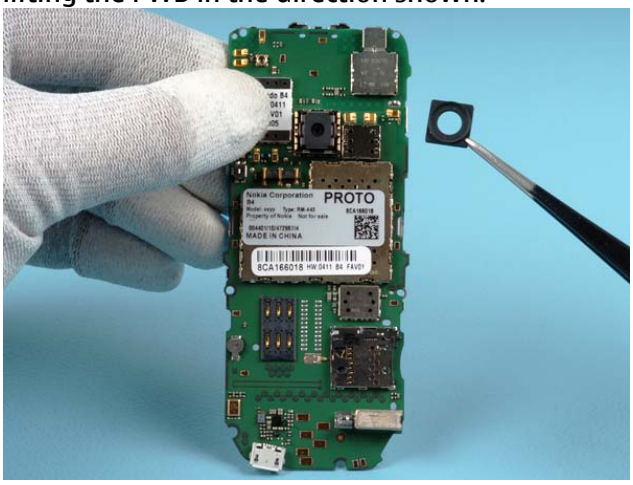


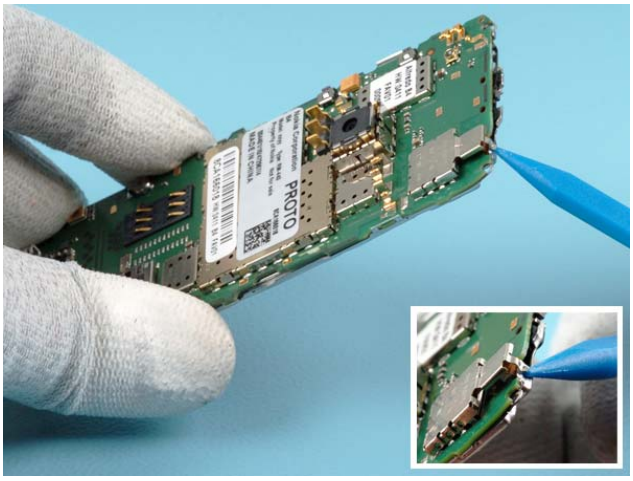
15) Separate the PWB from the B-COVER ASSY by lifting the PWB in the direction shown.



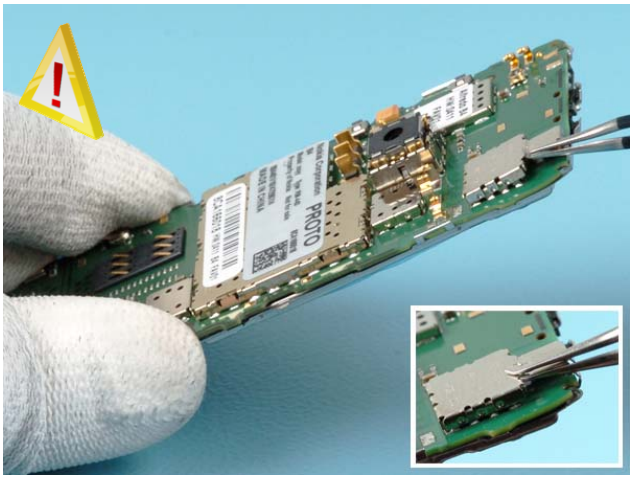
16a) Release the CAMERA GASKET with the tweezers.



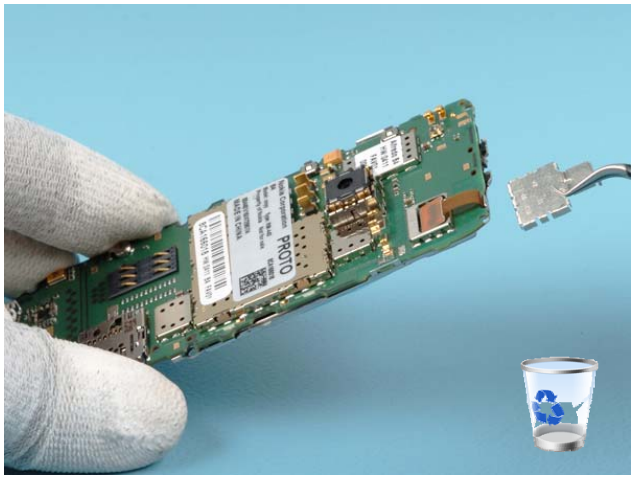
16b) Remove the CAMERA GASKET with the tweezers.



17) Open the clip of FLEX SHIELDING with the SS-93 tool.



18a) Carefully release the FLEX SHIELDING with the tweezers. Be careful not to touch the flex under the FLEX SHIELDING.



18b) Remove the FLEX SHIELDING with the tweezers. Do not use this part again.

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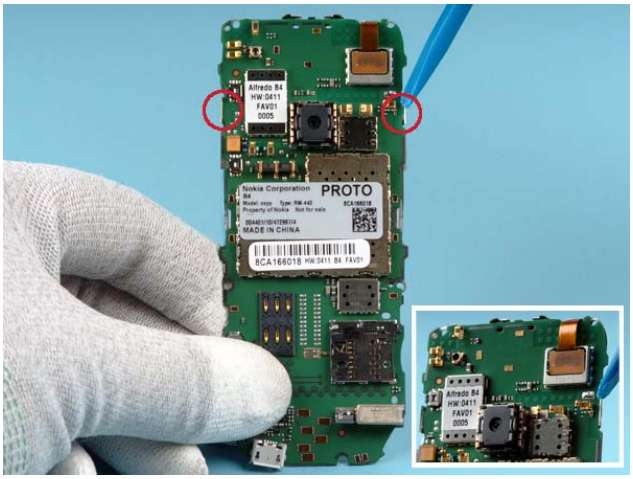
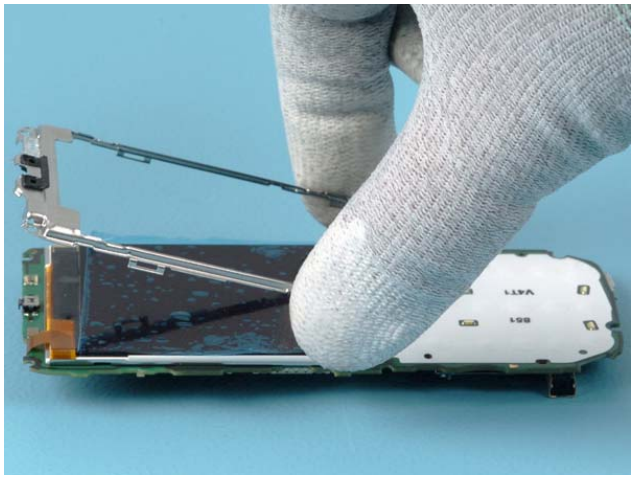
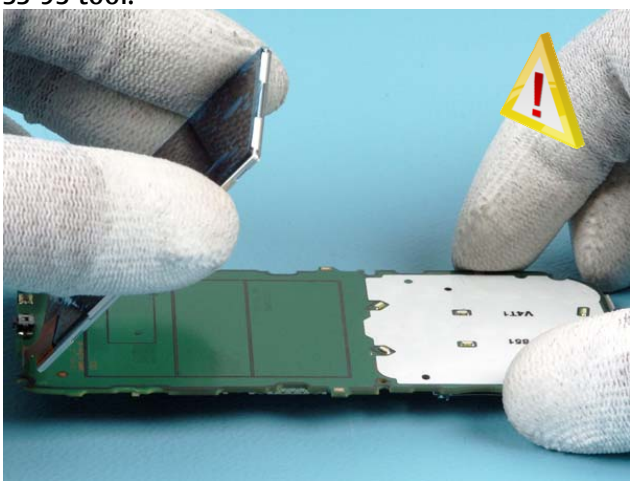


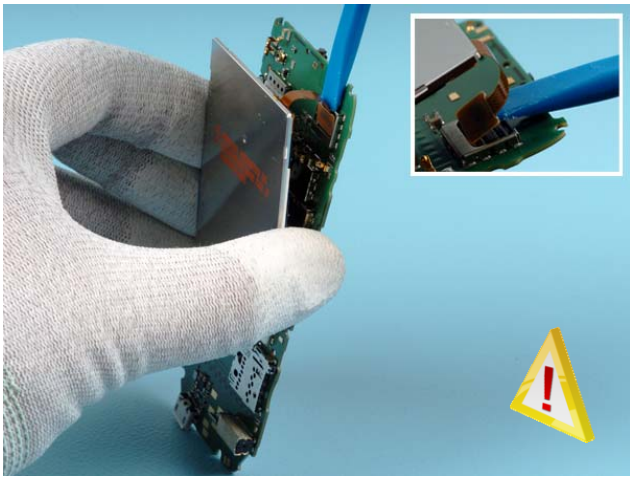
19) Open the snaps of the UI SHIELDING with the SS-93 tool.



20) Turn the PWB around. Remove the UI SHIELDING.



21a) and 21b) To get a better access to the LCD connector, carefully flip the LCD around to face the other side of the PWB.



21c) Carefully release the LCD connector with the SS-93 tool.

22) Remove the LCD.

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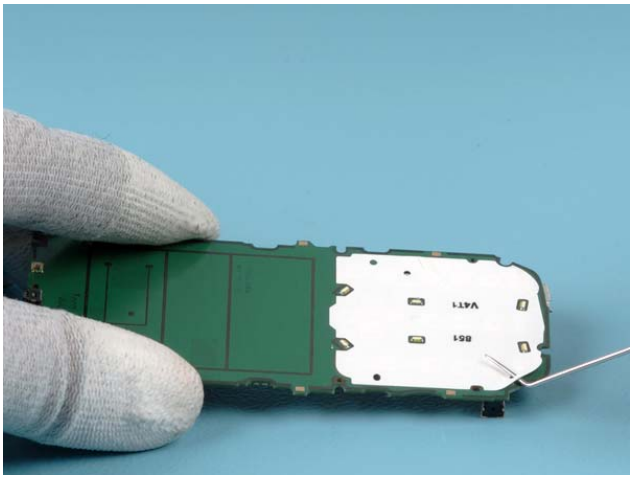
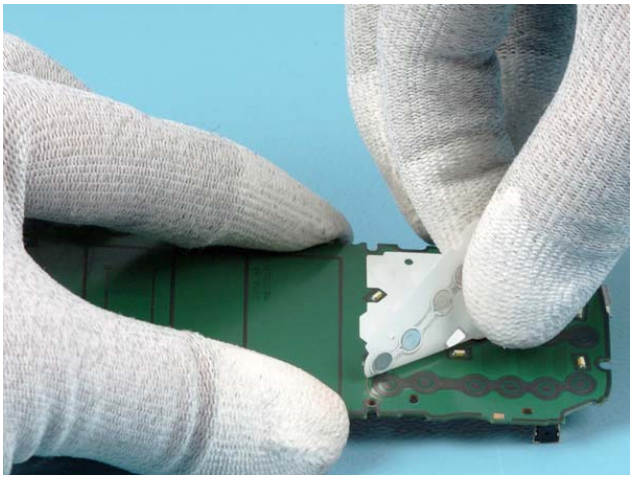
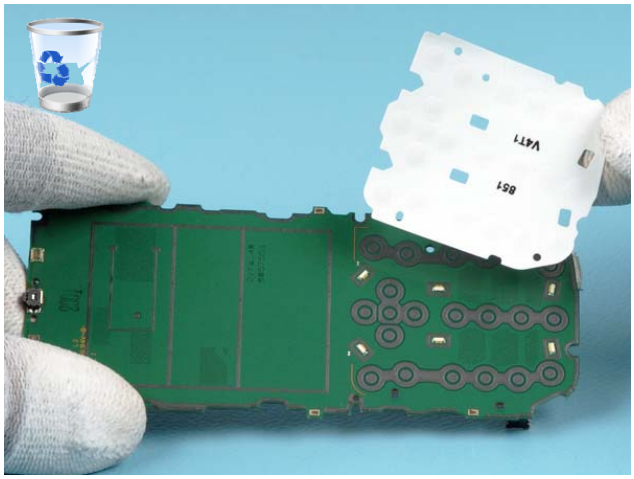


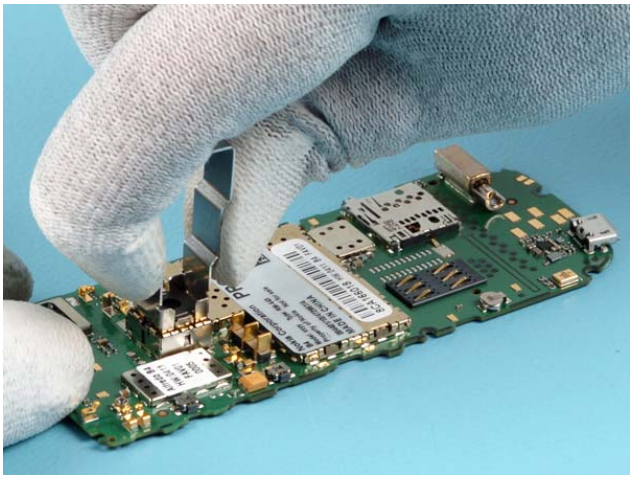
23a) If needed, remove the DOMESHEET from the PWB. Use the dental tool to lift the corner of the DOMESHEET.



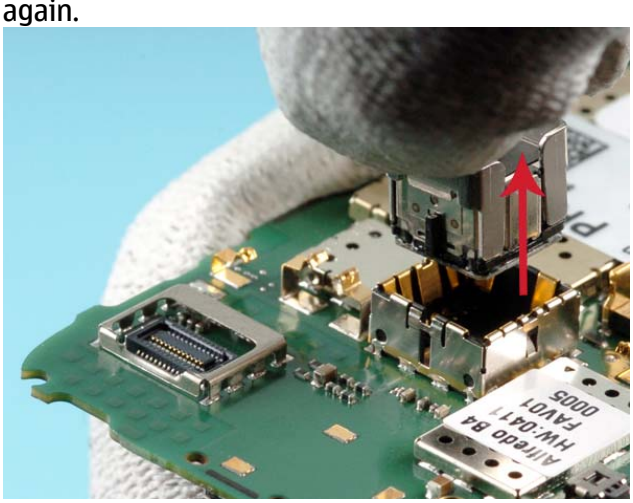
23b) Peel back the DOMESHEET.



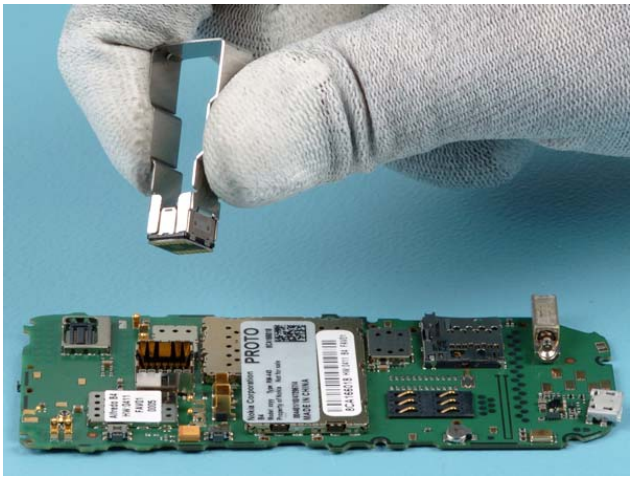
24) Remove the DOMESHEET. Do not use this part again.



25) Insert the SS-102 tool into the camera socket.



26a) Lift up the CAMERA MODULE with the SS-102 tool.



26b) Remove the CAMERA MODULE.

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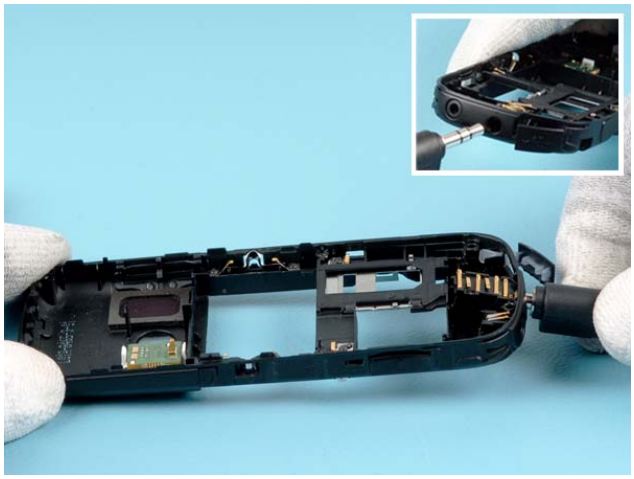
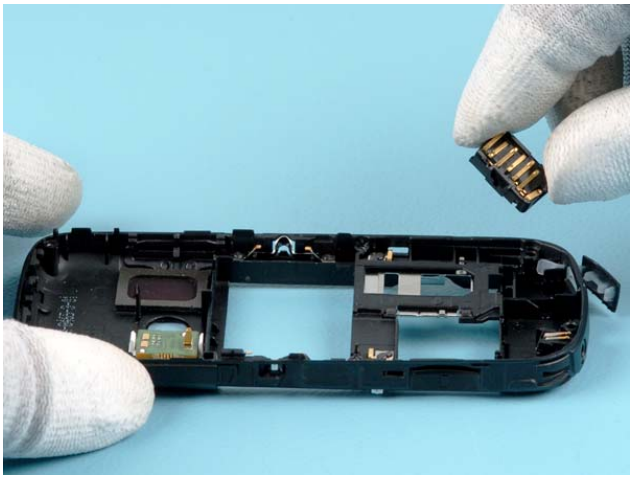
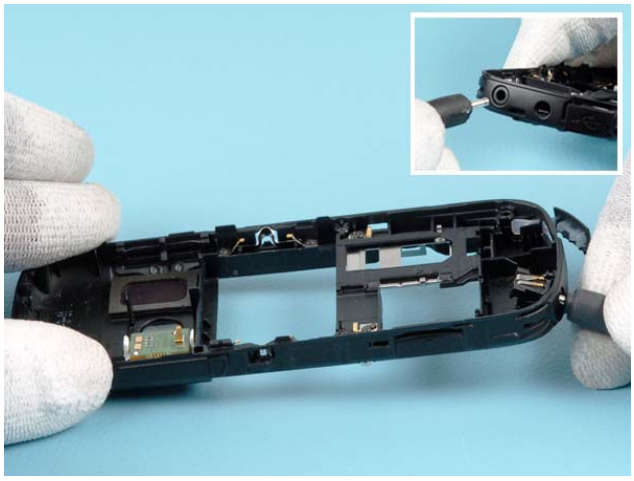


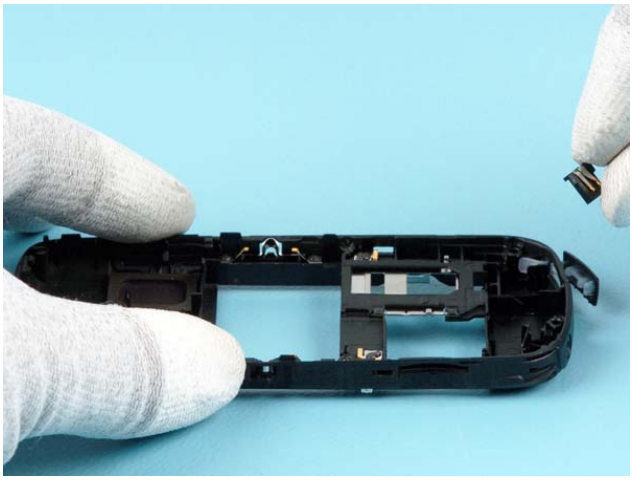
27a) Use the A/V plug to release the A/V connector.



27b) Remove the A/V connector.



28a) Use the charger plug to release the charger connector



28b) Remove the charger connector.

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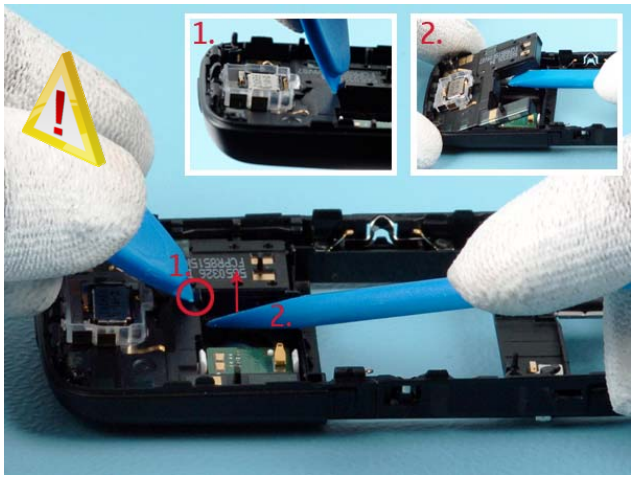
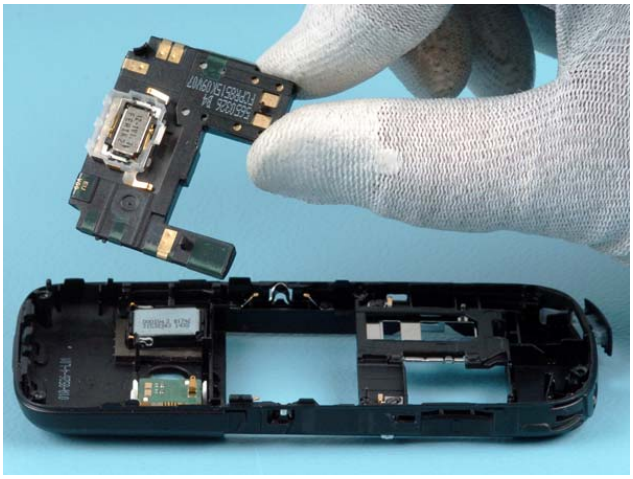
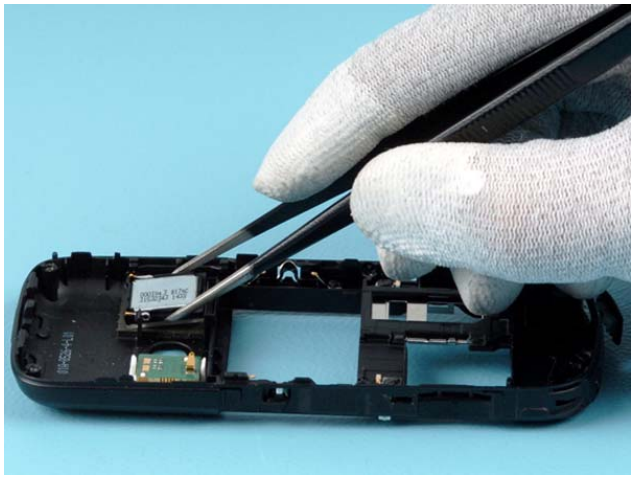


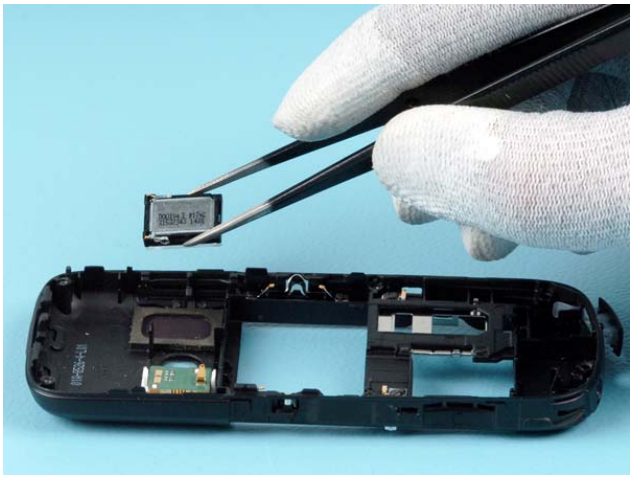
29) Use the SRT-6 tool to release the clip of the ANTENNA MODULE as shown (1.).
Simultaneously, lift up the ANTENNA MODULE with the SS-93 tool (2.).
Be careful not to damage the components on the flash module!



30) Remove the ANTENNA MODULE.



31a) Release the IHF SPEAKER with the tweezers.



31b) Remove the IHF SPEAKER with the tweezers.

End of disassembly.

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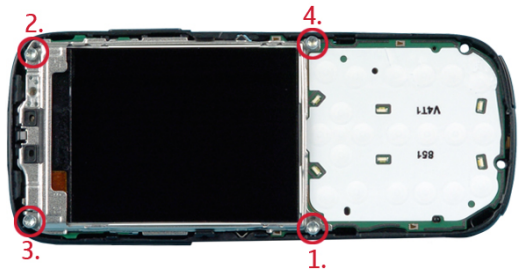
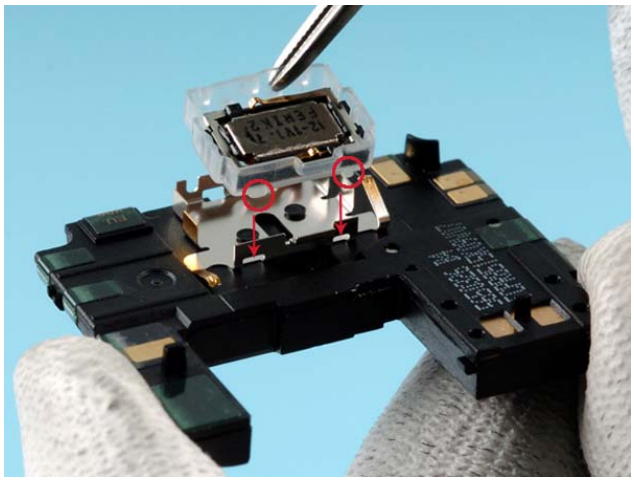
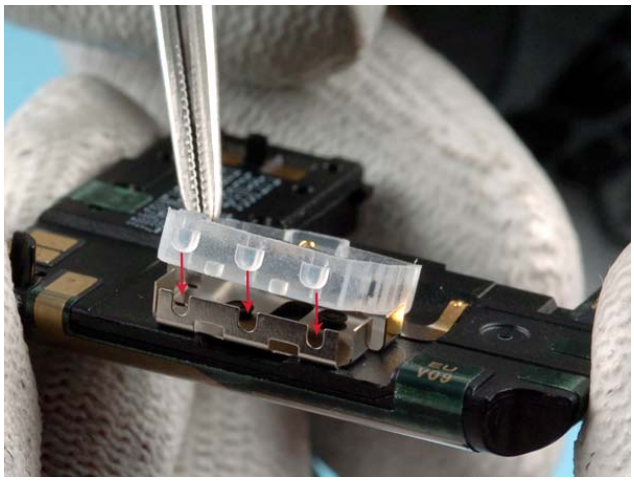
11. ASSEMBLY HINTS

	
1) Tighten the screws to the torque of 21 Ncm in the order shown.	2) Tighten the screws to the torque of 21 Ncm in the order shown.



Use the tweezers to assemble the EARPIECE/RUBBER GASKET ASSY as shown. Make sure that the rubber supports are correctly positioned and aligned with the metal frame.



Do the same on the opposite side.

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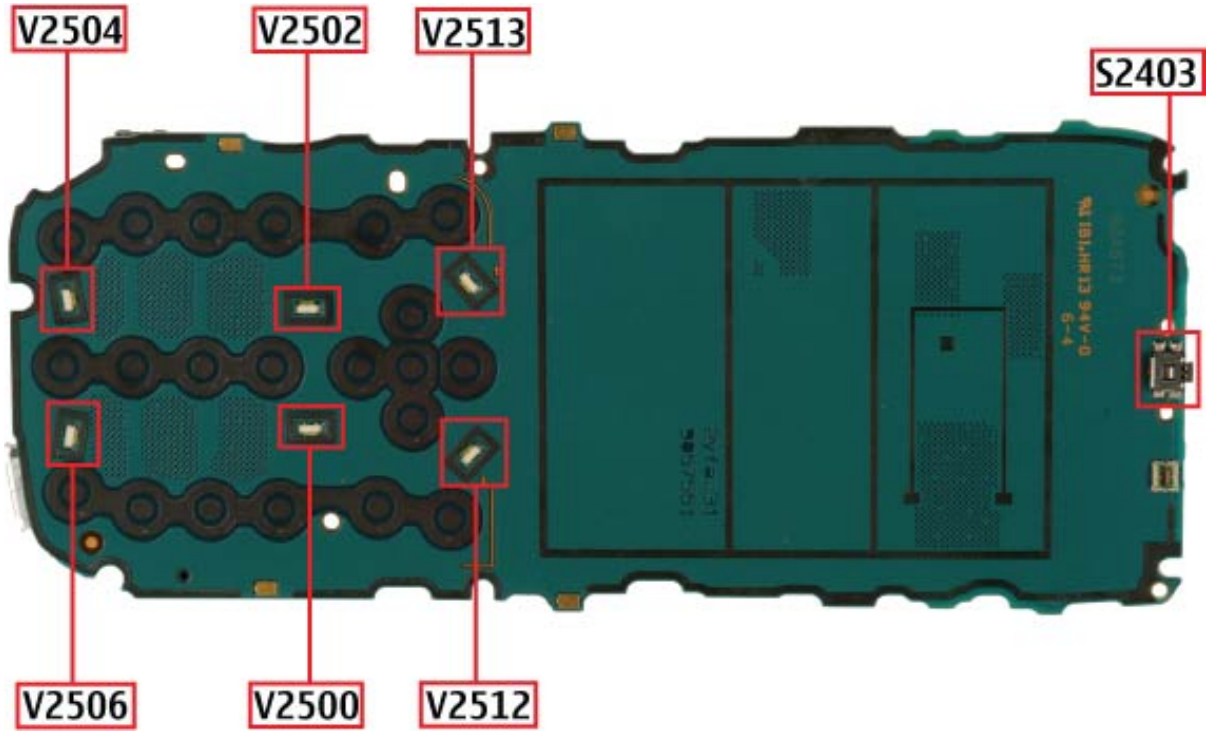
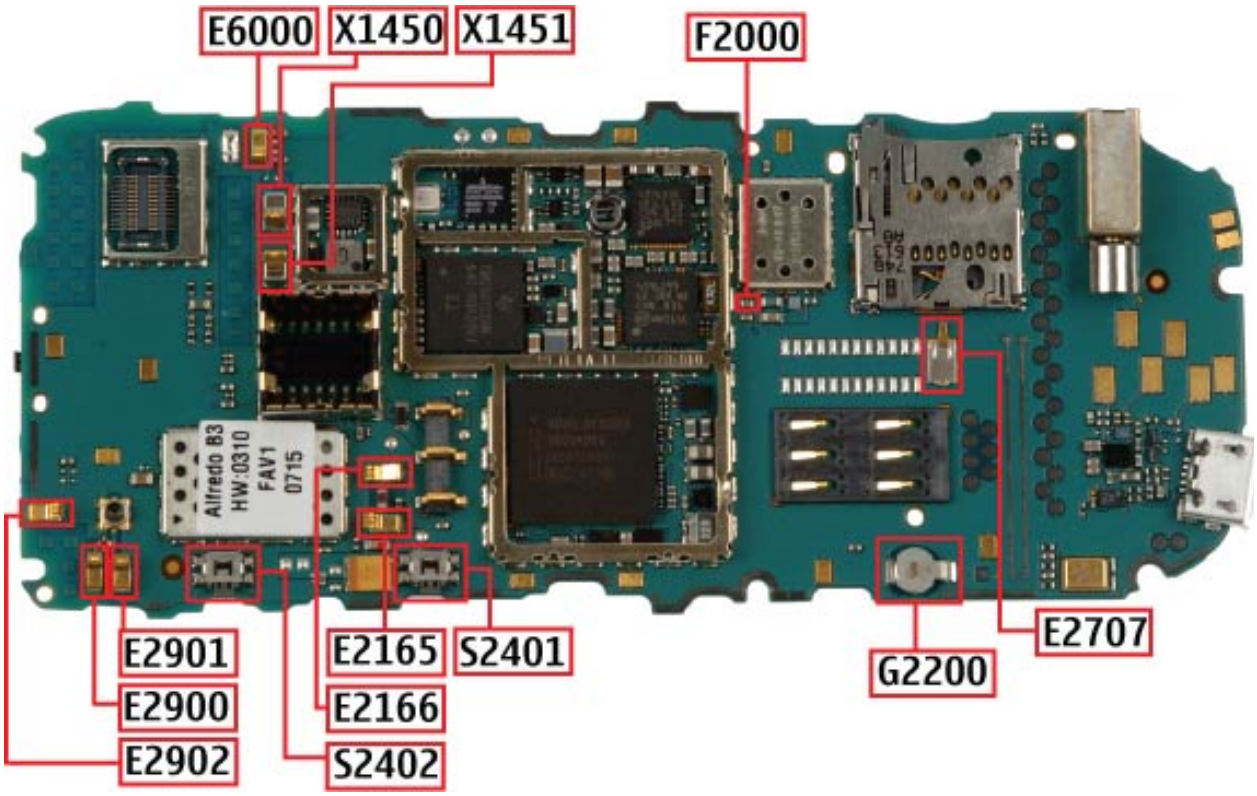
12. SOLDER COMPONENTS

Solder components only for Level 2





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